

NEW TAXA IN THE GENUS ALSOPHILA

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During a taxonomic revision of the *Alsophila swartziana* group two new species and a variety were found, which are described as follows.

Alsophila tryonorum Riba, spec. nov.

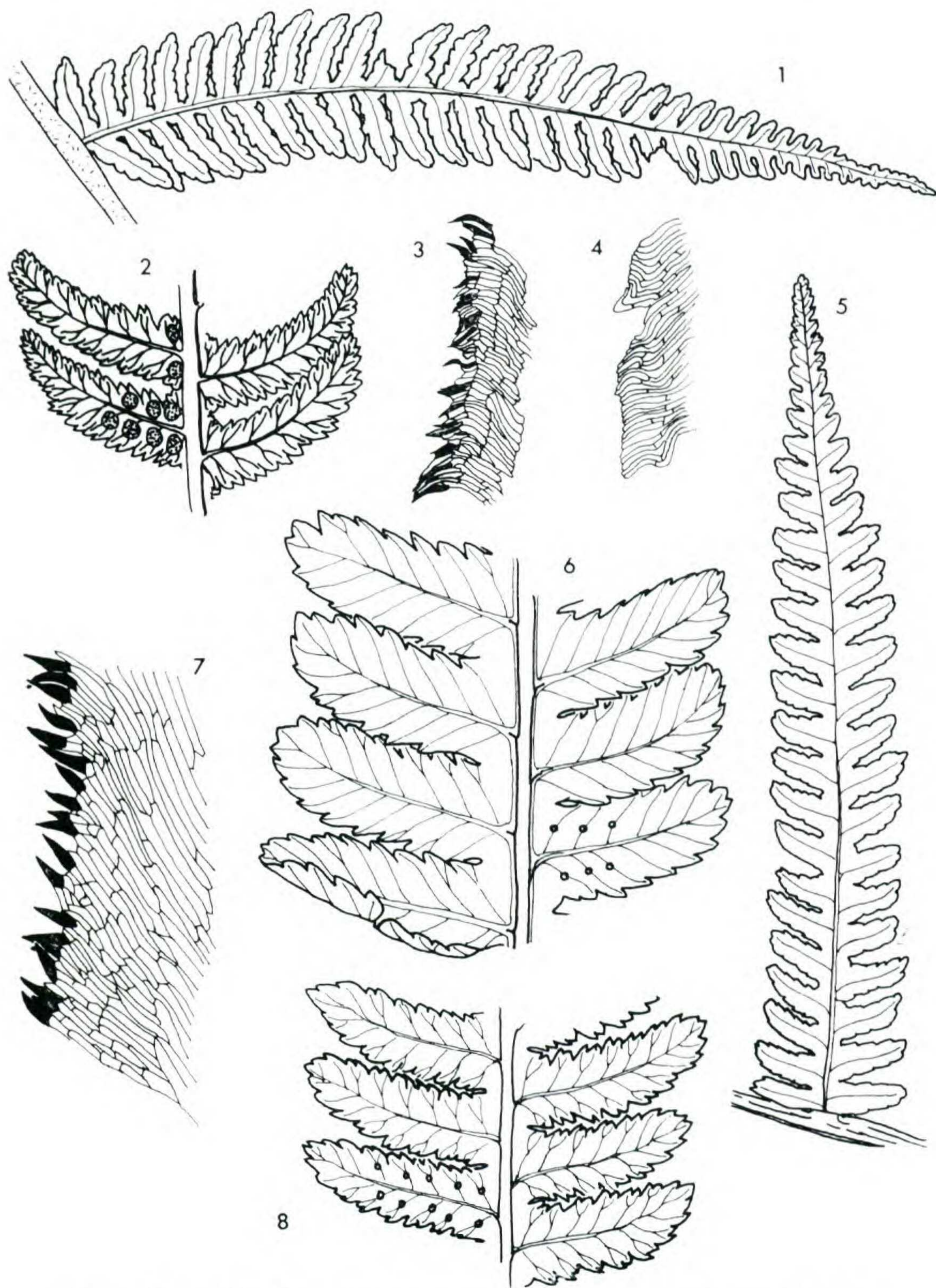
Figs. 1-4

Species *A. conjugatae* et *A. trichiatae* affinis. Petiolus crassus aculeatus squamatus valde pubescens, squamis lanceolatis basaliter truncatis bicoloribus denticulis fuscis tenuibus, trichomatibus biformibus rigidis et catenulatis. Lamina bipinnato-pinnatifida 3.0-3.5 m. longa 1.4-2.0 m. lata. Pinnae sessiles lineari-ovatae 70-100 cm. longae 35-40 cm. latae, rhachides secundariae pubescentes trichomatibus biformibus rigidis et catenulatis, pinnulae sessiles pinnatifidae lanceolatae longe acuminatae 13-20 cm. longae 1.5-2.7 cm. latae, costae subter squamatae et pubescentes, squamis tenuibus parvis orbiculatis apiculatis, trichomatibus biformibus aliquot rigidis plerumque flexosis multis catenulatis. Segmenta supra pubescentia in costulis venis et inter venis, subter valde pubescentia in costulis et venis, trichomatibus rigidis ad margines vix ciliatis, venae 11-13-jugae obliquae venulis 1-2-jugis, sori 7-10-jugi ad furcam venarum vel basaliter plerumque in venulis basalibus inserti.

Holotypus: Cuesta de Fusagasugá, Dept. Cundinamarca, COLOMBIA, 2540 m. Feb. 18, 1940, *Cuatrecasas 8036* (US).

Paratypi: VENEZUELA. Aragua: Colonia Tovar and vicinity, *Fendler 49* (pars) (F, GH, MO, US), *Pittier 9345* (GH, NY, VEN, US); between El Portachuelo and Ocumare, *Pittier 11394* (VEN, US); between Maracay and Choroní, *Pittier 13902* (GH, VEN, US). COLOMBIA. Antioquía: Páramo de Sonsón, *Bro. Daniel 3437* (US); La Ceja, *Bro. Daniel 683* (US); Cundinamarca: Cuesta de Fusagasugá, *Cuatrecasas 8071* (F, GH, US); Tolima: Caldas Termales, Santa Rosa de Cabal, *Dryander 2742* (US); Honda-Ruíz, prov. de Soledad, *Mayar 75* (US); Cauca: Popayán, *Yepez 175* (F, US); Valle del Cauca: Hoya del Río Digua, *Cuatrecasas 14982* (F, GH); Putumayo, between San Francisco and Sachamate, *Ewan 16673* (GH, US). ECUADOR. Napo: Río Chingual, *Acosta 13247* (F); *Sodiro* (NY); Nanegal, *Sodiro* (US).

This species shows an evident relation with *A. trichiata* Maxon because of the similarity of the distribution of the pubescence. However, in *A. trichiata* the rigid trichomes are longer and the catenate trichomes of the petiole are not so abundant as in *A. tryonorum*; the petiole scales in *A.*



Figs. 1-4. *Alsophila tryonorum* Riba. 1. — Pinnule, $\times 0.5$; 2. — Ultimate segments, $\times 1.5$; 3. — Border of crozier scale, $\times 20$; 4. — Border of petiole scale, $\times 20$. All from the holotype. Figs. 5-7. Also-

trichiata have a margin with contiguous dark denticulations, while in *A. tryonorum* the margin has very few dark denticulations or none, except in crozier scales where the dark denticulations are always present. Another relation is with *A. conjugata* Spruce in the similarity of the petiole scales together with the abundant winged trichomes and bullate scales in the lower surface of the segments. However, the petiole in *A. conjugata* is glabrous, while in *A. tryonorum* it is strongly pubescent with rigid and catenate hairs.

This species is named after Dr. Rolla M. Tryon and Dr. Alice F. Tryon for their contributions to the taxonomy of the ferns.

Alsophila estelae Riba, spec. nov.

Figs. 5-7

Petiolus gracilis aculeatus squamatus, pubescens solum adaxiale latere, squamis lanceolatis, basaliter brunneis denticulis fuscis, trichomatibus rigidis. Lamina bipinnato-pinnatifida 1.2-1.5 m. longa 55-60 cm. lata, rhachis pubescens. Pinnae sessiles, lineari-ovatae acuminatis 25-30 cm. longae 10-11 cm. latae, rhachides secundariae pubescentes trichomatibus rigidis, pinnulae sessiles pinnatifidae lineari-lanceolatae acuminatae 5-6 cm. longae 1.0-1.2 cm. latae costae subter pubescentes et vix squamatae, trichomatibus biformibus rigidis et catenulatis, squamis tenuibus parvis orbiculatis. Segmenta supra pubescentia in costulis, subter pubescentia in costulis et venis trichomatibus rigidis et adpressis, squamata in costulis, squamis bullatis, ad margines vix ciliatis, venae 7-8-jugae obliquae plerumque simplices, sori 2-4-jugi in medio venarum.

Holotypus: Mount Horeb, ca. 3/4 mile South (air) of Green Hill, on trail to Woodcutters Gap, Portland Parish, JAMAICA, 3700 ft. December 31, 1966, *Riba 214* (MEXU). *Isotypus*: GH.

Paratypi: Mount Hybla, Cinchona, St. Thomas Parish, *J. P. (Jamaican Plants) 49* (GH, IJ); same locality as holotype, December 28, 1966, *Riba 196* (GH, MEXU).

Alsophila estelae is one of the most graceful tree ferns in Jamaica. At first sight it can be easily confused with *A. swartziana*, a species that grows in the same place. However, the slender trunk (3-4 m. tall and ca. 4-6 cm. thick) and the crown of small leaves make that species clearly dis-

phila estelae Riba. 5. — Pinnule, $\times 2$; 6. — Ultimate segments, $\times 5$; 7. — Border of petiole scale, $\times 60$. All from the holotype. Fig. 8. *Alsophila scabriuscula* Maxon var. *guatemalensis* Riba, ultimate segments, $\times 3$. From the holotype.

tinctive in the field. *Alsophila estelae* is easily differentiated from *A. swartziana* (beside the characters already mentioned) by the usually simple rather than forked veins and by the position of the sorus when, rarely, the veins are forked. Then the sorus is borne below the fork in *A. estelae* rather than at the fork as in *A. swartziana*. In addition, *A. estelae* lacks the flat scales or winged trichomes near the base of the sori which are characteristic of *A. swartziana*.

This species is named for Mrs. María Estela Riba.

Alsophila scabriuscula Maxon var. *guatemalensis* Riba, var. nov.

Fig. 8

Differt a forma typica sinu inter segmenta fertilia acuto vel anguste quadrangulari segmentis 6-7 mm. longis. Segmenta crenatodentata vix duplicato-dentata, costulae et venae subter pubescentes trichomatibus longis flexuosis, venae 7- 8-jugae, sori 5- 6-jugi, receptaculum parvum sessile paraphysisibus longis flexuosis.

Holotypus: Between Ixcán and Finca San Rafael, Sierra de los Cuchumatanes, Dept. of Huehuetenango, Guatemala, July 24, 1942, *Steyermark* 49417 (F).

Paratypes: Alta Verapaz, between Cubilquitz and Hacienda Yaxcabnal, *Steyermark* 44829 (GH, US); Izabal, along Río Frío, *Steyermark* 39942 (F, US); along Río Tameja, *Steyermark* 41802 (GH, US); Sierra del Mico, between Los Amates and Izabal, *Kellerman* 7163 (F).

The differences between this variety and var. *scabriuscula* are in the sinuses, which in the variety *guatemalensis* are acute to narrowly quadrangular, and in the smaller size of the leaves and their parts. In the variety *scabriuscula* the sinuses are widely quadrangular and the leaves are larger with the ultimate segments up to 17 mm. long.

Although the two varieties occur in the same general region, they are distinct as demonstrated by the characters given above. Additional collections in the future may show intergradation between the two variants, but with the material that I have, they can stand as varieties.

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